

ATCD-GT (ATSE-AC/1B Feb 98) 1st End Mrs. Banks/DSN 680-4077
SUBJECT: Army Digital Topographic Data (DTD) Requirements

19 Feb 98

Commander, U. S. Army Training and Doctrine Command, ATTN:
ATCD-GI, Fort Monroe, VA 23651-5172

THRU Headquarters, Department of the Army, Deputy Chief of Staff
for Intelligence, ATTN: DAMI-ZC (Mr. Mark Ewing), 1000
Army Pentagon, Washington, D.C. 20310-1067

FOR National Imagery and Mapping Agency, ATTN: Operations
Director (DO) (Ms. Roberta Lenezowski), 4600 Sangamore
Road, Bethesda, MD 20816-5003

1. Concur with basic correspondence.
2. The digital terrain data requirements as identified are essential in supporting the Army's near and mid-term battlefield digitization efforts.
3. HQ TRADOC POC is Mrs. Banks, DSN 680-4077.


ALLAN M. RESNICK
Acting Deputy Chief of Staff
for Combat Developments

DAMI-POB (ATSE-AC/18 FEB 98) 2nd End LTC Arndt/DSN 225-3649
SUBJECT: Army Digital Topographic Data (DTD) Requirements

Headquarters, Department of the Army, Deputy Chief of Staff for Intelligence, ATTN: DAMI-POB,
Washington D.C. 20310-1067 18 MAR 1998

FOR National Imagery and Mapping Agency, ATTN: Operations Director (DO) (Ms. Roberta
Lenezowski), 4600 Sangamore Road, Bethesda, MD 20816-5003

1. Concur with basic correspondence.
2. The Initial digital geospatial requirements as identified are essential in supporting the First Digital Division and Army Vision 2010.
3. Emerging Army requirements for Multispectral imagery and detailed requirements for Mission Specific Data Sets are being developed and the Intelligence Policy Directorate is working with NIMA to establish these requirements in detail.
4. ODCSINT POC is LTC Jeff Arndt, DSN: 225-3649.

for **Claudia J. Kennedy**, SIES, AFCSINT
CLAUDIA J. KENNEDY
Lieutenant General, GS
Deputy Chief of Staff
for Intelligence



DEPARTMENT OF THE ARMY

UNITED STATES ARMY ENGINEER SCHOOL
FORT LEONARD WOOD, MISSOURI 65473-8800



REPLY TO
ATTENTION OF
ATSB-AC (115)

18 FEB 1998

MEMORANDUM THRU

Headquarters, Training and Doctrine Command, Deputy Chief of Staff,
ATTN: ATCD-SC (Mr. Al Resnick), Port Monroe, VA 23651-5000

Headquarters, Department of the Army, Deputy Chief of Staff for Intelligence,
ATTN: DAMI-SC (Mr. Mark Ewing), 1000 Army Pentagon, Washington, D.C.
20310-1067

FOR National Imagery and Mapping Agency, ATTN: Operations Director (DO)
(Ms. Roberta Lenezowski), 4600 Sangamore Road, Bethesda, MD 20816-5003

SUBJECT: Army Digital Topographic Data (DTD) Requirements

1. This memorandum establishes the Army's initial requirement for digital topographic data (DTD), stating the need for high resolution feature, elevation, and imagery data at near world-wide coverage, to be produced by the National Imagery Mapping Agency (NIMA) or other approved co-producers. This document follows a comprehensive staffing with Joint, HQDA, and key U.S. Army agencies. This DTD is urgently needed for development of the Army Battle Command System and synthetic environmental modeling which are key enablers for the fielding of the First Digitized Division (FDD) in FY 2000, and First Digitized Corps (FDC) in FY 2004.

2. The DTD must support the following capabilities as a minimum:

a. Common Operating Picture (COP): Establish a framework of foundation data (FD) for a common terrain view of the battlespace enabling situational awareness for Joint C4I strategic planning, the Army Battlefield Command System (ABCs), and modeling and simulation to enable monitoring of mission execution. It is envisioned that this foundation data would be available to units prior to their deployment.

b. Modeling and Simulation: Provide greater resolution in feature and object oriented data to support modeling and simulation for mission planning and rehearsal. Establish fly-through and drive-on or through and walk-on capability by utilizing Digital Terrain Elevation Data (DTED) levels 1-5 in conjunction with varying resolution feature data.

c. Mission Specific Data Sets (MSDS): A specific set of MSDS (a densification of foundation data) will be tailored for the warfighter's area of operation or specified mission(s).



Center for Excellence

d. Lethality/survivability: Provide high-resolution, accurate MSDS to support IFFB, mission planning, wargaming and rehearsal, and mission execution monitoring. High-resolution and accurate MSDS will provide detailed information to units enabling them to perform highly accurate mobility analysis, line of sight, terrain visualization, etc., increasing their lethality/survivability.

e. Joint Interoperability: All future contingency operations will be joint. As such, the framework data should be compliant with all Department of Defense (DoD) data specification, allowing commander's at all echelons and all services, to share a common picture of the battlespace.

3. The required general requirements of DTD include:

a. Use of the Army-defined DTD framework built from geospatial information obtained from NIMA organic capabilities, other DoD agencies, other federal agencies, or foreign countries to provide a standard framework of features, elevation, and imagery which will enable a common picture of the battlespace for joint Service and Army commanders.

b. Integrate user-defined MSDS with equivalency in resolution at a minimum of 1:50,000 TLM standard.

c. Provide DTD framework in stages which vary in resolution and area coverage. Framework consists of:

(1) Stage 1: Foundation data

(a) Resolution

(1) Elevation data - DTED 2

(2) Feature data - Includes the following features: vegetation, lines of communications, drainage, selected utilities, ports, airfields, and built up areas at a 1:50,000 (TLM) standard as a minimum. Also included are boundaries, soil/surface materials, Littoral Warfare Data and Digital Nautical Chart data.

(3) Imagery - Controlled Image Base (CIB) (5m), Multispectral Imagery (MSI) (5m), Hyperspectral Imagery (HSI) (5m).

(b) Area of coverage - worldwide (land mass which is not covered by perennial snow cover)

(2) Stage 2: MSDS, an Army-defined data set.

(a) Resolution

(i) Elevation data - DTED 3

(2) Feature data - Feature data to include boundaries, hydrography, industry, obstacles, physiography, population, surface drainage, slope/surface configuration, soil/surface materials, transportation, utilities and vegetation at a 1:50,000 TLM standard as a minimum.

(3) Imagery. CIB(5m or 1m), MSI(5m or 1m), HSI(5m or 1m) - as required by commander.

(b) Area coverage - Outside Continental United States (OCONUS) areas prioritized from CINC warfighting plans. Continental United States (CONUS) training and equipment test areas prioritized by ODCSINT.

(3) Stage 3 Enriched Data -

(a) Resolution -

(1) Elevation data - DTED 3-5, as determined by mission

(2) Feature data - densified to support the mission. Data will be captured at the appropriate resolution and density to support the warfighter requirements for visualization, analysis, wargaming, and simulation.

(3) Controlled Image Base (CIB) (5m-1m), MSI (5m-1m), HSI (5m-1m) - as required by commander.

(b) Area of coverage - defined by impending or in-progress operations.

d. DTD Foundation Data produced by FY 2000 (stage 1).

e. Produce MSDS OCONUS in areas prioritized from CINC warfighting plans or as prioritized with follow-on Army warfighter, training, and research and development documentation. (Stage 2).

f. Develop a rapid response capability to produce or verify data on demand as required by emerging crises or contingencies at a minimum to stage 2 equivalency:

Produce 20 x 20 KM area in 18 hrs.

Produce 90 x 90 KM areas in 72 hrs.

Produce 300 x 300 KM area in 12 days

ATSE-AC

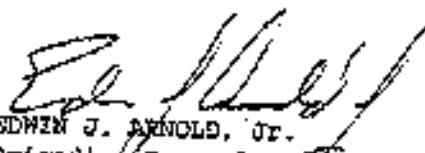
SUBJECT: Army Digital Topographic Data (DTD) Requirements

Data requirements (features, attributes, DTED resolution, imagery resolution) will relate directly to the mission requirements. These times may be reduced by mapping to lower standard if agreed to by the requesting command and producer.

4. It is imperative for this memorandum to be approved so the Army's requirements for DTD are conveyed to NIMA for earliest production to support the FDD and FDC in FY 2000 and FY 2001, respectively. The Army's modernization effort mandates that DTD be available to commanders for command and control, training, modeling and simulation, mission planning and rehearsal, and warfighting. While this memorandum establishes the initial Army requirement, follow-on documentation will be necessary and submitted IAW HQDA and HQ TRADOC guidance. Ultimately, the DTD requirements should go through the JROC process as a valid joint requirement and receive appropriate mission production from NIMA.

5. Point of contact for this action is COL Bob Kirsch, TRADOC Program Integration Office-Terrain Data, DSN 676-4086, commercial (573) 563-4086, or email: kitschrg@wood.army.mil.

FOR THE COMMANDANT:



EDWIN J. ARNOLD, JR.
Brigadier General, U.S. Army
Assistant Commandant

CP:

Commander, United States Army Corps of Engineers/Chief of Engineers,
ATTN: DABN-2C, 1225 Jefferson Davis Highway #1410, Arlington, VA 22202-5000
Deputy Chief of Staff for Operations and Plans, ATTN: DAMO-FDD, 400 Army
Pentagon, Washington, D.C. 20310-0400
Deputy Chief of Staff for Intelligence, ATTN: DAMI-POB, 1000 Army Pentagon,
Washington, D.C. 20310-1067
Program Executive Office, Command, Control and Communications Systems,
ATTN: SEAB-C3S, Fort Monmouth, NJ 07703-5000
U.S. Army Simulation, Training and Instrumentation Command, ATTN:
AMSTI-MC/AMSTI-CCTS, 12350 Research Parkway, Orlando, FL 32826-3276
U.S. Army Topographic Engineering Center, ATTN: CETSC-TD-BE/CETBC-PD-T,
700 Telegraph Road, Alexandria, VA 22315-3864
Commander, U.S. Army Combined Arms Center, ATTN: ATZL-ZA/ATZL-TP,
Fort Leavenworth, KS 66027-1344